Arizona Medicine

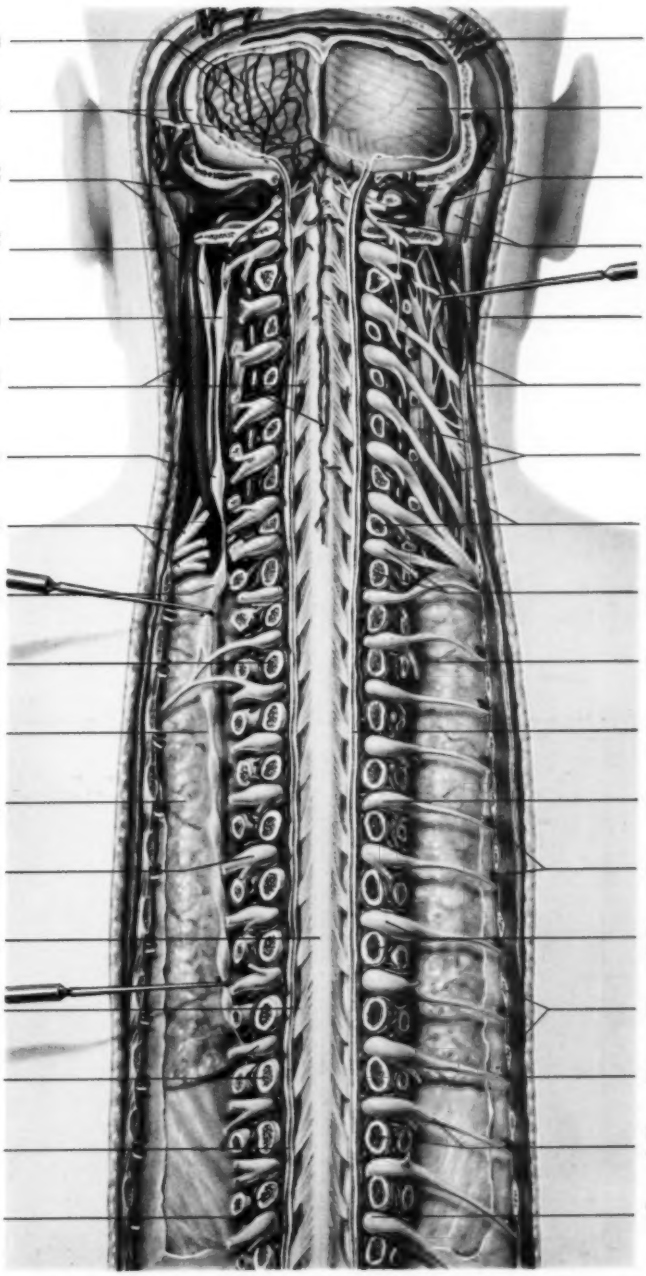
Journal of

ARIZONA MEDICAL ASSOCIATION

SOUTHWESTERN MEDICAL CONVENTION
October 29, 30, 31, 1953

PIONEER HOTEL
TUCSON, ARIZONA

Cervical *and* Thoracic Regions *of the* Spinal Cord



This is one of a series of paintings for Lederle by Paul Peck, illustrating the anatomy of various organs and tissues of the body which are frequently attacked by infection, where aureomycin may prove useful.

Lederle

ARIZONA MEDICINE

Journal of ARIZONA MEDICAL ASSOCIATION

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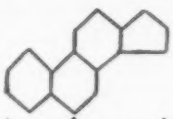
The symbol SCHERING denotes leadership in steroid hormone  research and manufacture -- including Cortogen in the most useful clinical forms. For systemic therapy, use Cortogen tablets SCHERING or injection  . For eye  disorders use Cortogen ophthalmic suspension -- sterile  . The Schering seal SCHERING appears on each tablet and package -- your assurance of quality.

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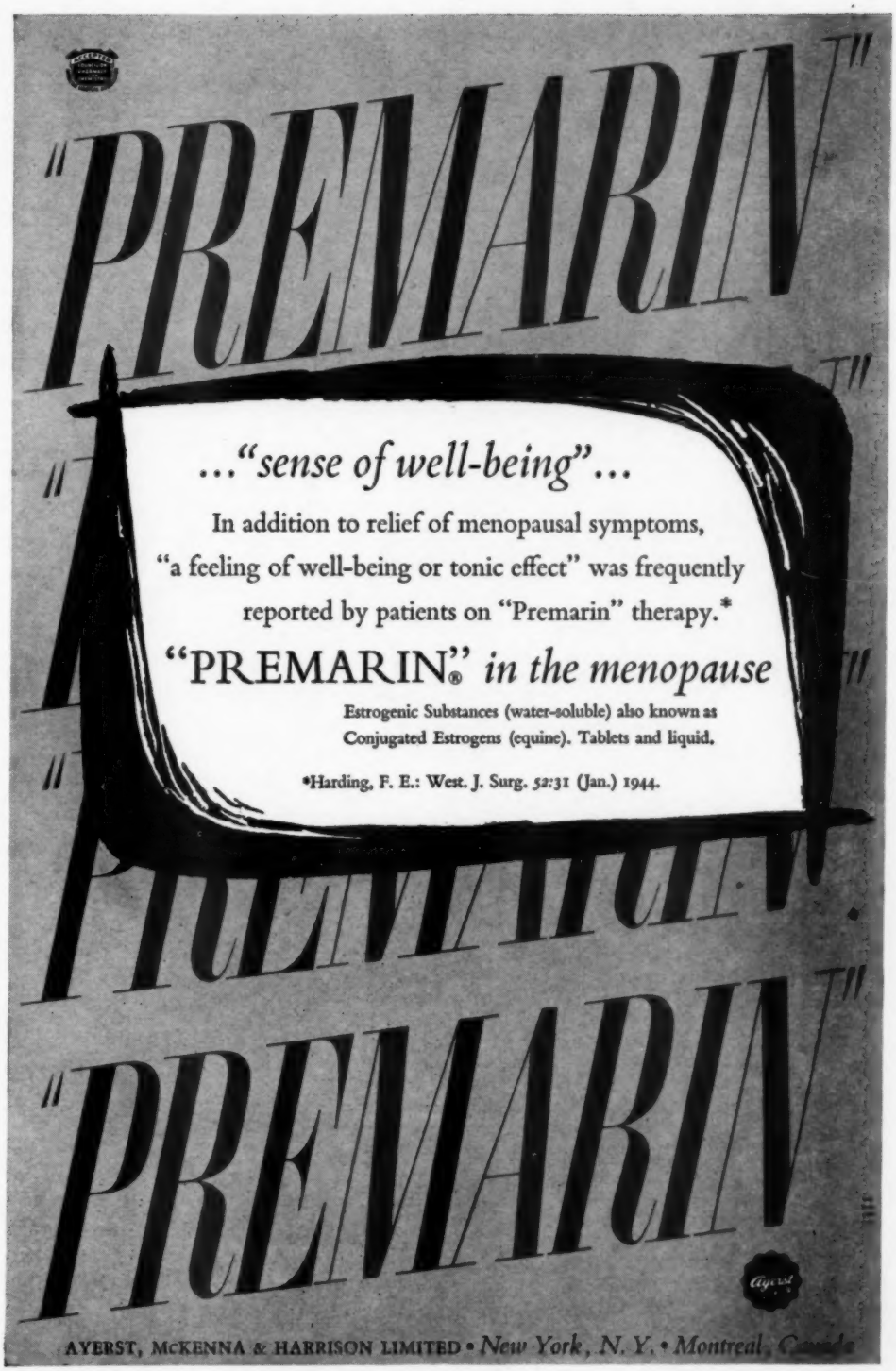
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Original ARTICLES

INDICATIONS FOR IRRADIATION OF BREAST LESIONS

U. V. Portmann, M.D.
Tucson, Arizona

There are only a few indications for irradiation of benign diseases of the breast. The principle one is for the analgesic effect when there is pain from acute or subacute mastitis, adenosis, or chronic cystitic mastitis.

Tumors of the breast which appear clinically to be benign should be excised because some will prove to be malignant when examined microscopically. Examination should be made immediately, preferably by frozen sections. If cancer is found more radical surgical procedures are indicated at once.

The principle indication for irradiation is when cancer is found. In general about 85 per cent of cases with small movable cancers and no metastases, or stage I, survive five years after operation alone. But 15 per cent die of cancer. This may be because (1) unrecognizable metastases to substernal lymph nodes which may develop especially from inner quadrant tumors, (2) cancer cells may pass through the axillary node group to metastacize in the supraclaviculars or elsewhere, (3) metatases may escape meticulous microscopic examination of axillary nodes, (4) lymph nodes with metastases in them may not have been removed.

Stage II cases have small freely movable tumors with metastases in only a few axillary nodes. The general five year survival rate is reduced to 35 per cent or less by operation alone.

Post-operation roentgen therapy is indicated for stage I and II cases. Local recurrences on the chest wall seldom occur in such cases, but metastases in regional nodes or elsewhere may develop. Post-operation irradiation should be given to the regional lymph node areas including the substernal groups. It may not be necessary to irradiate the chest wall if there is reason to believe that all of the malignant tissue has been removed. The irradiation may not cure but will increase the five year survival rate in 15 to 20 per cent of cases by destroying some neoplastic cells thereby delaying local growth and remote metastases.

Operations are contra-indicated for stage III and IV cases except occassionally for removal of ulcerations which do not respond to adequate irradiation. Stage IV cases have remote metastases which of course contra-indicates-operation. Incidentally all patients to be operated upon for tumors of the breast should have radiographic examinations of the chest, vertebrae and pelvis prior to operation to eliminate the possibility of metastases in these regions.

Irradiation for remote metastases for stage IV cases is purely palliation. Sex hormone therapy may be given concurrently. In older women stilbesterol seems to be best by oral doses of 10 to 30 mg. per day. In younger women testosterone propionate intra-muscularly in doses of 100 mg. three times a week may be given but half this dose often is effective. Also ablation of ovarian functions by roentgen therapy seems to be beneficial in some cases.

The principle indication for irradiation and benefits for cancer of the breast is for stage III cases which are incurable and inoperable. The criteria of incurability should be carefully sought and women with them not subjected to opera-

Presented before the Annual Meeting of the Arizona Medical Association held at Tucson, April, 1953.

tion but treated by irradiation alone. These criteria areas follows:

The Skin

1. Edema (orange or pink skin) of more than slight extent.
2. Ulceration of more than slight extent.
3. Brawny red and inflamed not obviously due to infection.
4. Secondary skin nodules.

The Breast

1. Diffusely edematous.
2. Diffusely infiltrated
3. Multiple secondary tumors.
4. Fixation to chest wall.

Metastases

1. Axillary lymph nodes numerous, extensively involved and fixed.
2. Supraclavicular lymph nodes or edema of arm.
3. Involvement of contralateral breast or lymph nodes.
4. Remote metasteses in bones, lungs or other viscera.

Eliminating the presence of remote metastases of Stage IV, the criteria given are those of stage III. An analysis which I made of 136 Stage III cases shows the following results in percentages alive following operation alone and x-ray therapy alone in yearly periods up to five years.

	No.	1	2	3	4	5
Alive operations only	53	49.5	17.0	6.0	4.0	4.0
Alive x-ray alone	83	83.3	54.1	33.3	20.8	17.0

It will be noted that only half of the patients operated upon survived one year and 4 per cent survived five years. In all probability 4 per cent would have survived as long without treatment. Also the percentage of survivals in each yearly period of patients given roentgen therapy alone is higher than those operated upon and 17 percent lived five years. This was a worthwhile extension of economic usefulness and life.

CONCLUSIONS

1. Irradiation may relieve pain associated with certain benign disease of the breast.

2. Small tumors of the breast should be excised, examined microscopically at once and if cancer is found more radical operations are indicated without delay.

3. Stage I and II cases of cancer of the breast receive postoperation roentgen therapy to delay extension.

4. The criteria of incurable cancer of the breast have been given.

Stage III and IV cases should not be operated upon but treated by irradiation alone. Also the use of sex hormones and ablation of ovarian functions may be beneficial.

THE ROLE OF THE NON-SPECIALIST IN THE CARE OF ALLERGIC DISEASE

Samuel M. Feinberg, M.D. *
Chicago, Illinois

Clinical allergy is at the crossroads! Unless we can interest the non-specialist in the care of at least some of the simple allergic problems, the prevention and management of allergic mishaps arising from diagnostic and therapeutic procedures, and cooperation with the allergist in difficult cases, millions of allergic individuals are doomed to unnecessary suffering. The role of the non-specialist in the management of allergic disease should be actually a greater one than that played by the allergist. The purpose of this presentation is to indicate to you the reasons why the non-specialist must deal with allergy, the know-how of importance to him and how this knowledge can be obtained.

*Presented before the annual meeting of the Arizona State Medical Society, at Tucson, April 27, 1953. From the Department of Medicine and the Allergy Clinic, Northwestern University Medical School, Chicago.

WHY THE NON-SPECIALIST MUST DEAL WITH ALLERGY

Prevention and care of man-made allergic manifestations. One of the big problems in medical practice today is the prevention and care of allergic syndromes arising from diagnostic and therapeutic procedures. This phase of medicine was negligible 50 to 75 years ago, when the chief diagnostic instruments were the stethoscope and fever thermometer, and when therapy was limited to blood-letting, calomel and a few other relatively simple drugs. Quinine, aspirin and coal tar derivatives then became part of our armamentarium and thousands of cases of allergy to these drugs ensued. Urticaria is one of the lesser manifestations. Asthma from aspirin and other analgesic drugs is not rare, particu-

larly in those who are subject to chronic asthma. Asthma induced by aspirin is extremely violent and sometimes fatal. In addition to these effects it became evident that some drugs, particularly aminopyrine, were capable of producing hematologic changes, especially granulocytopenia.

Then came the era of arsphenamines, with the concomitant advent of thousands of cases of allergic reactions, many of them serious and some fatal. The use of animal sera for prophylaxis and cure of infections and diseases of intoxication began to demonstrate a train of untoward responses such as serum sickness and the immediate anaphylactic type of reaction, some of which were fatal.

Almost from the very inception of the use of sulfonamides allergic effects to these drugs have been noted. Rashes, "serum-sickness" type of manifestations, occasional anaphylactic type of response, granulocytopenia, aplastic anemia, thrombocytopenia and periarteritis have been among the effects observed.

The newer antibiotics have created a new problem in allergy which must be faced by every practitioner of medicine. Topical applications of penicillin and some other antibiotics to the skin have been largely abandoned because of their great tendency to produce contact sensitization. The delayed type of reaction from penicillin, occurring customarily about ten days after its administration, and consisting mainly of urticaria, angioneurotic edema, arthralgia and fever, still affects 2 to 5 per cent of those receiving the drug. The use of different types of penicillin or the concomitant use of antihistamines has had no appreciable effect on this tendency. More recently it has become apparent that a more dangerous type of penicillin allergy is on the increase. Due to repeated use of the drug, an increasing number of people are acquiring the anaphylactic type of sensitivity. In mild form this may consist of symptoms of urticaria or asthma immediately following administration of the drug. In its more severe form the patient goes into shock and frequently becomes unconscious. In such instances a fatal outcome is not unlikely. There is good reason to believe that the fatalities from such anaphylactic episodes now amount to several score. Such reactions presumably may result from any type of penicillin, and recently it has come to light that the iodide salt of penicillin, penethamate hydriodide (neo-penil[R]) is particularly likely to produce such effects.

To these man-made allergies one should add those arising from insulin and liver injections, hormones, vitamines, vaccines, contrast media for gallbladder and kidney visualization, and many drugs such as opium derivatives and others. Also to be included are allergic reactions resulting from transfusions. Usually these take the form of urticaria, but other and more serious manifestations may result. They are caused either by the reaction of the donor's allergic blood with a food (or drug?) which the recipient has ingested or by the interreaction of the recipient's allergic serum with an antigen from the donor's blood. Such reactions are, of course, minimized by pooled plasma.

Care of simpler and acute allergic disease. There are about 10 million people with allergy in this country, about half of whom require fairly regular or repeated care and the other half occasional attention. The number of physicians who confine their practice to allergy and who are reasonably well qualified does not exceed one thousand. Ten thousand patients per allergist is an impossible load and it is quite obvious from the standpoint of numbers alone that a large percentage must seek relief from the non-specialist.

It is no more than right that the internist, general practitioner and pediatrician should undertake the care of the simple cases of hay fever, and should be able to manage the patient with the occasional or mild asthma. The rhinologist is expected to prescribe for the patient with an allergic rhinitis or even at times to look for the specific etiologic factor. The acute case of urticaria must, in most instances, be managed by the non-specialist. The successful pediatrician must learn how to handle the problem of infant feeding from the standpoint of the prevention and management of food allergy. Even the surgeon and the obstetrician should recognize that they encounter allergic problems. In addition to the allergy arising from therapeutic and diagnostic procedures, important items include the tendency to postoperative atelectasis in asthmatic patients, the choice of an anesthetic, the effect of pregnancy on the mother's allergy and advice as to the possibilities of inheritance of allergy. It is the family physician on whom the patient must depend when he has an acute allergic illness, whether it be hives or asthma.

Cooperation with the allergist. The allergist requires the cooperation of the non-specialist in the care of many of the allergic patients. Since allergists cannot be planted at distances of several miles apart it is obviously difficult for many patients to come to the specialist for regular and repeated treatments. It is here where the general practitioner, internist, pediatrician or other type of specialist must act as an associate to the allergist. He should carry out the suggestions, advice and give the injections prescribed by the allergist. The non-specialist may have to see that the patient carries out the diets and other suggestions. As a family doctor he is frequently in a position to learn many things about the patient — his habits, emotional factors and the physical environment of his home and occupation — details which may escape the specialist in his isolated consultation room in the heart of a large city. The physician who is closer to the patient may frequently have to prescibe medication indicated for the conditions at the particular moment.

The non-specialist and allergist should regard themselves as true associates in the care of the patient. The allergist should be informed periodically of the progress of the patient, new developments and any other points of interest. He should not be regarded as a glorified laboratory technician who issues a report to the doctor, or even as a casual consultant who after seeing the patient once, has terminated his interest and usefulness. The allergist, on the other hand, must not regard the cooperating physician as a technical assistant or in the capacity of a nurse who is expected only to follow a list of doses and give a few injections to the patient. The allergist must see to it that the cooperating physician is fully informed about the patient's findings, the rationale of his treatment, the composition of the antigens, the goal to be achieved and anything else that the allergist knows about the patient. Above all, each must have confidence in the other. Under these favorable conditions the non-specialist need not fear the loss of practice when he refers a patient to the allergist. Not only can he, in many instances, continue to care for his patient, but even where he cannot or does not wish to do so, the successful outcome increases patient and family goodwill and results in ultimate gain to the referring physician. To the allergist, of course, the conscientious cooperation of the non-specialist is a matter of absolute necessity. Without him he cannot succeed.

INFORMATION ON ALLERGY OF IMPORTANCE TO NON-SPECIALIST

It is apparent that all of this presupposes that the non-allergist knows something about allergy. Obviously at this point it is not possible to go into detail of what this knowledge should be, but it is appropriate to suggest the main topics of information that should be part of the practitioner's armamentarium.

The causes and manifestations of allergy. The mere recognition of the role of many drugs in the causation of allergic manifestations will do much to minimize the possibility of such occurrences. The knowledge that some gastrointestinal manifestations or that some headaches may be due to food allergy, the realization that pollen and molds cause the majority of reasonal hay fevers, and the willingness to face reality in the asthmatic child and not wait for it to "outgrow" the asthma, are but examples of bits of information which may be ultimately of help to the patient. It's important to know that an allergic cause cannot be found by the honest allergist for every case of asthma or vascomotor rhinitis. It is equally important to be hard-cored about accepting syndromes into the allergic fold just because they are puzzling and do not have an immediate explanation at hand. Chronic fatigue, muscular pains, insomnia, jitteriness, schizophenia, acne and chronic alcoholism are not allergic manifestations in spite of the claim of some extremists to the contrary. Neither has it been proven that refined food products, such as traces of starch, purified dextrose or cane sugar carry the allergenicity of their food of origin.

Principles of diagnosis. Much can be learned about the allergic patient from history-taking. The history in some instances is far more important than any other diagnostic procedure. The closer the physician is to the patient the more informative the history may be. This is then to be regarded as a major instrument of the non-specialist. The history may suggest the presence of certain complications or it may give a clue to the diagnosis of the specific cause. And frequently it may warn the physician what medication not to give.

The elements of skin testing should be known whether the physician does the tests himself or depends on a report from someone else. For atopic disease (asthma, hay fever, eczema, etc.)

the appropriate skin test is either the scratch or intradermal procedure. The scratch test is safer, more often clinically significant and less painful. The intradermal test is more sensitive but at the same time lends to a greater incidence of non-significant reactions, it is more painful and may be hazardous. Many allergists use the intradermal to supplement the scratch method. For the non-specialist the scratch technique is preferable. A positive test consists of an urticarial wheal, with erythema and itching occurring within 5 to 20 minutes after the application. The patch test is employed in contact dermatitis. It is read in 24 to 48 hours. A positive reaction consists of itching, erythema and possibly vesiculation.

The interpretation of the skin test is a major concern of the non-specialist. To assume that a positive skin test solves the cause of the patient's complaint is to open the door to endless error and much injustice to the patient. A positive skin test may also mean that the antigen is related to the one which causes the allergy, that it's the cause of an allergy of which the patient does not complain or that the clinical manifestation may not show itself months or years later. One must be aware that certain substances, such as histamine, morphine, codeine and acetylcholine, give a positive whealing reaction in everyone. Many solutions or preparations used for testing are irritating and the resultant responses are false and misleading. Dermographism is a frequent source of false reactions.

Conversely, a negative test must not be taken at its face value. In some allergic conditions such as urticaria and headaches, the tests are usually negative even when the causative allergic factor is known. In "serum sickness" type of reactions, consisting of urticaria, arthralgia and fever, occurring several days after the administration of serum, penicillin and some other therapeutic substances, the skin test is almost always negative. Such manifestations cannot be forecast by a skin test prior to the administration of the drug. On the other hand, the anaphylactic or immediate type of reaction to penicillin or serum is usually associated with a positive whealing skin test. In view of the growing hazards from penicillin, it is advisable that the administration of this drug in those whose have had it previously be preceded by a scratch test. If the latter is negative an intradermal test (10 to 100 units to 1 cc) may be used. If the test is positive the use of penicillin is hazardous.

In spite of their capacity to produce allergy most drugs do not give positive skin tests. This is particularly true of aspirin, aminopyrine, phenacetin and related drugs. Aspirin may produce urticaria or such violent asthma that at times a single tablet has resulted fatally. The informed physician will not be fooled by the misinformed laboratory which issues a report that the patient has a negative skin test to aspirin and is, therefore, not allergic to that drug.

Principles of treatment. Since the non-specialist must administer most of the palliative treatment for allergy he must be cognizant of its major principles. Adrenalin is the best remedy for an allergic emergency, such as an anaphylactic reaction or acute asthma. But it is of little use in serum sickness, where antihistamines are preferable. The antihistamines have limited value, being useful particularly in the itching dermatoses and in allergic rhinitis; their effect in asthma is negligible. The iodides are still an excellent remedy in persistent asthma. Aerosols of epinephrine or isopropyl epinephrine (isuprel or norisodrine) are useful adjuncts in the treatment of asthma. ACTH and cortisone are valuable remedies in some cases of acute status asthmaticus and for the maintenance therapy of occasional persistent allergies, such as some cases of intractable asthma. They certainly should not be used as a first or routine measure, as a substitute for diagnosis or as a substitute for other more simple and less hazardous symptomatic remedies.

There is nothing more dramatic and more complete in the therapy of chronic disease than the relief of a chronic allergy by the removal of the specific cause. This should be the objective in the treatment of allergy whenever possible. To this end the non-allergist must learn a few elementary principles. The basic procedures in formulating a diet, the procedures for avoidance of house dust and the substitution of safe cosmetics are among such steps.

It is in the realm of desensitization therapy that principles of good practice are frequently abandoned. Desensitization should only be given for inhalant or contactant allergy. Inhalants should be used only if the cause is proven and avoidable. Pollen from plants which are insect

pollinated, dander of a dog which can be more easily removed from the home, or pollen from timothy which is hundreds of miles away do not call for desensitization therapy. For the most part, pollen, molds and house dust are the chief antigens used in desensitization, while occasionally the use of special, occupational or other unavoidable inhalants may be indicated. There must be a rational causal relationship before such therapy is employed. The principle of the use of small, harmless doses, of gradually increasing amounts should be followed. Conservatism should be the rule and reactions should be avoided. Desensitization therapy requires care and certain precautions but mastery of its use can be accomplished by the discerning physician.

Most physicians have had little if any opportunity to learn the principles of allergy when they were medical students. It is true that the curricula of most medical schools are giving increasing emphasis to allergy. Nevertheless, the practicing physician must discipline himself to acquire knowledge and experience from sources other than his undergraduate training. Short postgraduate courses are frequently available and helpful, providing that the physician does not delude himself into thinking that a course of a few days makes him a specialist. Allergy programs are frequently offered, such as by symposia at the state or county meetings or at the Allergy Session of the A.M.A. Regional and national allergy societies also offer programs from which the non-specialist can obtain considerable benefit. And last, but not least, there remains the valuable training derived from careful observation of patientsts, discriminative reading and study and the free exchange of ideas in the doctors' lounge in the hospital.

SUMMARY

The care of allergic patients requires both the allergist and non-allergist. The allergist is needed for the diagnosis and therapeutic guidance of the difficult cases. The non-allergist must handle the numerous simple cases of allergy and must learn how to prevent and manage the allergy arising from drugs. To the allergist and to the allergic patient the non-specialist is indispensable in the cooperation required to carry out management outlined by the specialist. With reasonable effort it is possible for the non-specialist to equip himself for this task and duty.

WHY REPORT COMMUNICABLE DISEASES?

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50 Years of Reporting

1953 marks the 50th Anniversary of compulsory reporting of contagious diseases in Arizona. The legislative act of 1903 creating the Territorial Board of Health established the legal framework for reporting. Since this original legislative enactment is still a part of State law, it is of more than historic interest:

> 68-303. *Report of Contagious Disease*—If it shall come to the knowledge of any person that a contagious, epidemic, or infectious disease exists he shall immediately report in writing to the Board of Health having jurisdiction the name and place of residence, if known, of every person affected with such disease and if he is the attending physician he shall report not less than twice in each week the condition of the person afflicted and the state of such disease. (Laws 1903, Ch. 65).

Federal legislation on collection of morbidity data preceded the Arizona enactment by about 25 years. In 1878, Congress authorized the U. S. Public Health Service to collect data for use in connection with quarantine measures against such pestilential diseases as cholera, smallpox, plague and yellow fever. (1) In 1893, another law was enacted authorizing the U. S. Public Health Service to collect weekly data from states and municipalities. In 1902, the Surgeon General was authorized to provide forms for the collection, compilation and publication of communicable disease data. Throughout much of its existence in Arizona, the program has been a cooperative federal-state-local venture. It has been modified somewhat from time to time to reflect changing conditions, but essentially has always involved the notification of health authorities of the names and addresses of persons with communicable disease.

Recent Developments Nationally

The latest major change nationally was made in 1951 when a committee of epidemiologists and

statisticians met at the Communicable Disease Center of the Public Health Service and viewed the list of reportable diseases to determine those which remain of national interest and to consider methods of improving the mechanisms for obtaining data. Following this meeting a revised national list of diseases was adopted and a procedure set up for publication weekly of brief narrative reports on epidemics and occurrences of rare disease – these reports to be channelled from local health authorities and epidemiologists through state health officers to the Public Health Service. This latter step was taken to supplement the existing system of weekly reports. One of the factors behind adoption of this mechanism for exchange of information was the possibility of biological warfare with the resultant need for a fast system of epidemic intelligence. By rapid amassing of information from all over the country, possibly significant events can be quickly screened and early control measures taken when indicated.

Recent Developments in Arizona

A radical change in the system of collecting communicable disease data was made in Arizona in January 1953. The former system was based on weekly numerical postcard reports from physicians supplemented by individual case reports on a fairly long list of diseases including tuberculosis, syphilis, gonorrhea, poliomyelitis, brucellosis, typhoid, etc. Several different types of case report forms were used – the type used depending on the disease.

Weekly postcard reports on the number of cases were eliminated under the new system. A single case card was adopted which can be used for any reportable disease. A brief description of the reporting system together with a cut of the report card and envelope is presented in the accompanying exhibit, "How to Report Communicable Diseases."

Value of Reports

Discussions of the value of any statistical reporting program are apt to fall into generalities which neither inform nor motivate desirable action. It is hard to avoid generalization and still retain brevity in a discussion of the value of communicable disease reports. A truly adequate statement must consider separately the special characteristics of each disease – the nature of available prevention and control measures, how the program actually operates, and the status of scientific research and possible need for information on incidence to help in developing new preventive measures.

Such a statement on value or use of communicable disease reports must also consider the needs of a wide variety of users. A list of recent special requests for morbidity data received by the State Health Department includes such voluntary health agencies as the National Foundation for Infantile Paralysis, the National Tuberculosis Association, various government agencies, newspapers, magazine feature writers, commercial pharmaceutical firms, research organizations, and schools of public health. The data receives an even wider distribution by the U. S. Public Health Service which regularly compiles and publishes data received from each state and territory.

The uses made of communicable disease data are constantly changing and it is not far-fetched to believe that the next 12 months may see some new use arise which cannot be anticipated today. The evolution and mutations which have occurred will be evident from the discussion which follows.

Disease Prevention and Control

The original purpose of communicable disease reporting was to enable officials to enforce quarantine measures. Today more emphasis is placed on preventive measures and less dependence on quarantine. This shift in emphasis, however, has not changed the need for case reporting.

There is a group of virulent diseases on which reports are required such as smallpox, diphtheria, rabies, malaria, and typhoid fever which have been virtually eliminated. The conquest of these important contagious and infectious diseases is one of the major triumphs of science, medicine, and public health. The great gains made in the control of these diseases, however, cannot be retained without continuance of control measures. Knowledge of even a single occurrence of any of these diseases is important. The report rings the alarm which indicates something has gone wrong with control measures; it makes it possible to bring community forces into action so that defects in the control program can be eliminated and further spread of the disease prevented.

There still remain a number of contagious and infectious diseases for which control measures are available but which continue to be quite common. Control programs such as those for

tuberculosis and venereal disease cannot operate effectively without case reports. By way of illustration, contacts cannot be followed up and brought to treatment unless physicians report the cases which they diagnose. Such follow-up, it should be stressed, is made only with the express permission of the physician.

Gamma Globulin Allocation

A new use of communicable disease incidence data which could not have been anticipated even a year ago is for allocating the limited supplies of gamma globulin. With the recent discovery that gamma globulin appears to afford a measure of temporary protection against polio by reducing the severity of paralysis, the potential demands on the limited supplies available require some fair system of allocation which will assure that available supplies are utilized where the need is greatest. Accordingly, each state will receive an allocation for polio based on the median number of cases reported during the period 1947-1951 inclusive. Emergency allocations for polio will then be made where severe outbreaks occur – the evidence of severity being officially reported cases. Parenthetically, it should be said that during the last polio season (1952) the bulk of reports were received from four to eight weeks after onset, and then in many instances only after follow-up of leads received from sources other than the attending physician.

To improve allocation of gamma globulin, the U. S. Public Health Service has requested that reports on polio cases be provisionally classified as paralytic or non-paralytic. This classification is necessitated in part by the high degree of uncertainty in the diagnosis of non-paralytic cases and the need to have knowledge of severe outbreaks so that officials responsible for allocation of supplies can more accurately determine the areas where need for additional supplies is greatest. The State Health Department joins the Public Health Service in requesting that physicians tentatively classify polio cases as paralytic or non-paralytic when submitting the original report on a case.

The danger of shortage of gamma globulin demands extreme care in utilizing available supplies for measles and infectious hepatitis. Accordingly, the State Health Department has adopted the policy that supplies will be allocated only where reported data show that need exists. This policy is influenced somewhat by the knowledge that if a really acute shortage occurs requests by the state for supplementary supplies for use with measles and infectious hepatitis will probably be met only if factual data are available to support the request.

Limitations of Mortality Data

In the past, considerable reliance could be placed on mortality data from death certificates to provide an index of the incidence or prevalence of certain communicable diseases. However, with the rapid forward strides of science and medical practice, mortality from most of the communicable diseases has been or is rapidly being virtually eliminated. For some diseases, however, the decline in mortality has not been accompanied by a proportional decline in incidence. This is true of tuberculosis where conclusions as to progress made in control may be quite false if based on mortality data alone. For this reason, it is more important than ever to improve tuberculosis reporting so that it will be a sensitive indicator of problems and progress toward the goal of eliminating the disease as a public health problem.

Inadequacy of Numerical Reports

For many years prior to 1953, Arizona collected communicable disease data through a system which made use of weekly numerical postcard reports from physicians, supplemented by individual case reports for a number of diseases. The elimination of the weekly postcard reports in January 1953 can in no sense be considered an Arizona innovation. A national study in 1950 of morbibdity reporting procedures used by the various states showed only three were using weekly reports from physicians, giving totals by disease. The remaining states all depended solely on individual case reports which gave as a minimum the name and address of the patient. (2) As far back as 1936, Dr. Carl Buck, then Field Director of the American Public Health Association made the following comment in a survey of Public Health in Arizona: (3)

"The present system of reporting on a card which merely indicates the number of cases of certain diseases and gives nothing concerning their specific location is almost useless and should be immediately abandoned. Cards should be supplied to physicians for reporting communicable diseases and such card should provide for all necessary pertinent data concerning that case, particularly name, age and specific address."

It will have been noted that the original legislation which required reports of contagious dis-

eases required an individual case report giving the "name and place of residence, if known, of every person affected with such disease". Our research does not disclose when or why a shift to numerical totals was made nor do we know why Dr. Buck's recommendation for elimination of weekly postcard reports was not carried out. We believe that the principal factor may have a reliance on the weekly postcard to obtain clues for follow-up to secure individual case reports.

The weekly numerical postcard report was simple to complete, but experience showed that it invited estimates and errors. Some physicians based their weekly reports on memory rather than referring to office records before preparing their reports. Many saved the reports and sent several weeks' reports in at one time. Follow-up on several "tularemia" outbreaks showed that the reporting physician had intended to report "syphilis" – the preceding item on the alphabetical list of diseases. In some instances the same tuberculosis cases were reported week after week. This was probably due to failure of an office assistant to understand that only new cases should be reported. These types of errors were discovered because they involved diseases for which case reports were requested. The amount of error in tabulation of diseases for which case reports were not requested can only be guessed at.

Case Reports Essential

Case reports giving name, address, and certain basic facts such as age, sex, race, and date of onset are basic to good morbidity reporting. Accuracy is improved by obtaining names, since duplicates and previously reported cases can be eliminated. Efforts to improve reporting can be extended because health departments can check on reporting of cases which came to their knowledge from sources other than physicians.

Addresses are essential for statistical allocation of cases to specific counties, cities or smaller areas within cities. The seasonal distribution of a disease is only available when date of onset is reported. Data on geographical distribution correlated with date of onset is basic to many epidemiologic studies. The age, sex, and race distribution is often fundamental for research.

Apart from statistical considerations, names and addresses must be reported for any disease where quarantine or follow-up of suspects is a part of the control program or if the physician wishes to refer cases for public health nursing services. The case report is also essential for epidemiological follow-up on cases to determine factors responsible for origin and spread of an outbreak.

The foregoing is by no means a complete resume of the interests of the users of communicable disease data, but it suggests the reasons which impelled inclusion of the minimum core of basic information on the case card. Although the demands for other types of information are great, a real effort was made to include a minimum number of items because of the demands on the physician's time and the desire not to make the system unworkable because of the number of items required.

The shift from weekly postcard reports to complete reliance on case reports required two basic essentials. First, a simple case card which could be used for any disease. Exploration of the experience of other states showed that California had recently adopted a single case card. Using the California card as a basic pattern, a few modifications were made to adapt the card to Arizona's needs. The second essential was a reduction in the list of diseases to the very minimum consistent with a good health program. Following this review, it was decided not to require case reports on influenza, chickenpox, german measles, impetigo, mumps, and ringworm.

Influenza is a disease of considerable public health significance because of the disability and economic loss it causes. It was not included on the list because experience has shown that reporting is notoriously inadequate due to the lack of use of specific diagnostic procedures, similarity in symptoms to other common diseases, and the vast number of cases which occur in epidemic periods. New techniques are being developed on an international and national level in an attempt to obtain the data needed for research and control.(4) Although case reports are not required for influenza or the various childhood diseases listed in the preceding paragraph, physicians are requested to report unusually high incidence.

Criticism has been received because measles was included on the list of diseases. We have already seen the value of measles information in the allocation of gamma globulin, and have noted the difficulties encountered with numeric reports where names and addresses are not given. The authors recognize, however, that the high incidence of measles during certain periods

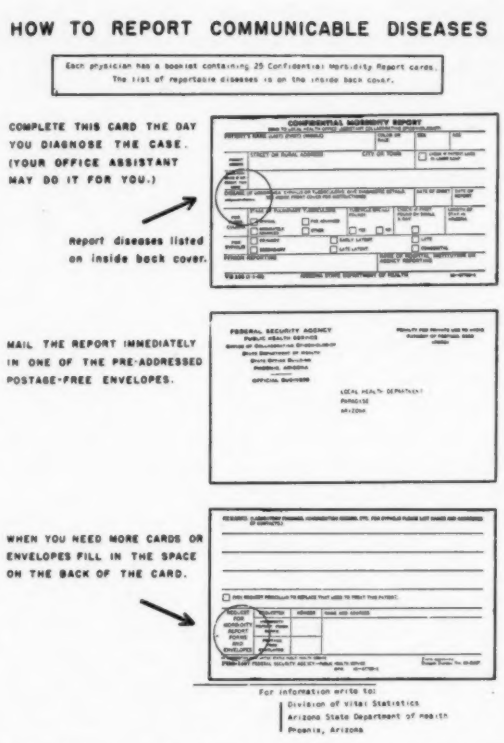
creates a real problem. This matter of securing data on incidence of measles will be reviewed again and an effort made to arrive at a satisfactory solution. Comments and suggestions from all interested persons on this matter or on any aspect of the reporting program will be appreciated.

Reporting Lacks

The compiled data on reportable disease suffer from all or at least nearly all the disabilities that a statistical series can have and still survive. These disabilities include gross failures to report, bias due to difficulties of diagnosis, and human carelessness. All these factors are interrelated, but perhaps the greatest single fault is incompleteness. Obviously cases which do not seek medical treatment cannot be reported, but there are tremendous gaps even for those cases which do seek treatment. When the weekly postcard system was used there were relatively few weeks when even 50 percent of the physicians submitted the postcard report. For tuberculosis, where there is a fairly extensive case finding program, almost two out of three deaths which occurred in Arizona in 1952 had never been reported as a case.

Resistance to communicable disease reporting, apart from the question of case reports on measles, seems largely to center on two objections. First is the desire to protect the confidential nature of the doctor-patient relationship. The most pertinent comment here is that the local and state health departments as custodians of the records take all reasonable means to protect the privacy of any individual whether he be the patient of a private physician or of a public clinic. Since reporting is a legal requirement which recognizes the primacy of the public interest, there seems little moral or ethical grounds for objection as long as the records are not abused. The second principal objection to reporting communicable diseases is the amount of work required of physicians who are greatly overburdened. Most physicians have office assistants to relieve them of routine work, and preparation of the simple case report card is routine. The physician's signature is not required on the report card although name of the physician is requested. The physician reader may forgive the sly suggestion that case reporting would be improved if preparation of cards were turned over to office assistants 100 percent.

With all the shortcomings of the case reporting program it is fair to ask, "Why waste time and money compiling figures which are incomplete and inaccurate?" One answer is that the reported statistics provide basic clues for estimating trends in prevalence and the size of a disease problem. If the user is aware of the limitations of the data and makes allowance for the various factors which affect thir interpretation, he may derive useful information which is available from no other source. Without case reporting, other more expensive and less satisfactory means would be required for case finding and for developing the basic data needed for planning and research. The greater the completeness of reporting the less waste there is in operation of public health programs since less effort must be directed toward case finding efforts. The physician who regularly and promptly submits reports not only has the satisfaction of observing the law, but makes an important contribution to public health.



1. National Morbidbity Reporting Manual of Procedures; National Office of Vital Statistics, Public Health Service, Washington, D. C.
2. Morbidity Reporting Procedures in State, Territorial and Independent City Health Departments; National Office of Vital Statistics, Public Health Service, Washington, D. C. (January 1951).
3. A Survey of Public Health in Arizona; Carl E. Buck, Dr. P. H., 1936.
4. Influenza Study Program in the United States; Public Health Reports, Vol. 67, No. 12.

PHOENIX Clinical CLUB

MASSACHUSETTS GENERAL HOSPITAL CASE RECORD NO. 24

The Case History in this discussion is selected from the Case Records of the Massachusetts General Hospital, and reprinted from the New England Journal of Medicine. The discussant under Differential Diagnosis is a member of the staff of the Massachusetts General Hospital. The other discussants are members of the Phoenix Clinical Club.

A six-and-one-half-year-old boy was admitted to the hospital because of rapid weight gain, growth of pubic hair and enlargement of the penis.

On routine examination nine months before admission, he had been found in good health, with normal development, weighing 44 pounds. The blood pressure was 100 systolic, 60 diastolic. The genatalia were noted as normal. Approximately six months before admission, however, he began to gain weight rapidly and to develop pubic hair and penile enlargement. He was otherwise completely asymptomatic and had been very energetic and active, with good muscular strength. He had a good appetite without special preferences, althought he ate a great deal of meat and potatoes. There was no special craving for salt or sugar. There were no voice changes, development of axillary hair, acne or other skin changes.

The past history revealed that he was born in breech presentation at term and weighed 6 pounds, 10 ounces. Weight gain and development were normal.

A review of the systems was negative except for an episode of "abscessed ears" and tonsillectomy eighteen months previously for frequent upper respiratory infections. He rarely wet the bed, and there were no other genitourinary symptoms.

Physical examination showed a well developed boy. The weight was 65½ pounds, and the height 46 inches. He seemed very plump, with prominant abdomen and hips. The neck and cheeks were fat. Examination of the head, neck and chest was negative. The heart was slightly enlarged to the left. The rate was normal, and there was a Grade II pulmonic sytolic murmur. An electrocardogram gave a normal tracing. The abdomen was plump and full, but no masses were palpable. There was definite, kinky pubic hair. The penis measured 7.0 cm. in length and 6.3 cm. in circumference. The testes were small and measured 1.9 cm. in cross section. The skin was clear, and there was no acne or unusual pigmentation. There was no axillary hair. Neurologic examination was negative.

The temperature was 99.2 F. the pulse 100, and the respirations 22. The blood pressure was 132 systolic, 96 diastolic.

The urine had a specific gravity of 1.022. The tests for sugar and bile were negative. There were rare red cells and white cells in the sediment. The blood hemoglobin was 14 gm., and the white-cell count 7700, with 78 per cent neutrophils, 14 per cent lymphocytes and 8 per cent monocytes. The eosinophil count was 112 cells per cubic millimeter. The serum chloride was 106 milliequiv., the sodium 140.4 milliequiv. per liter. The nonprotein nitrogen was 17 mg., and the fasting blood sugar 86 mg. per 100 cc. (the blood sugar of a specimen taken two hours after breakfast was 97 mg). A sample of sweat contained more potassium and less chloride per liter than normal. The urinary 11-17 oxycorticosteroid was 0.2 mg. per 24 hours. The 17-ketosteroids were 6.6 mg. per 24 hours.

X-ray films of the right hand and wrist indicated a bone age of seven years. Films of the skull failed to show any significant changes; the bones were of normal texture and density. The pituitary fossa was intact. Chest films showed clear lung fields. The heart was at the upper limit of normal size. The aorta was prominent. Anterior and posterior views of the abdomen showed normal appearance of the left kidney, spleen and liver. The right kidney was obscured by intestinal contents. There was no evidence of abdominal tumor.

On the fourth hospital day an operation was performed.

DR. LOUIS B. BALDWIN

This six year old boy had precocious sexual development over a period of six months with gain in weight, growth of pubic hair and enlargement of the penis without proportional enlargement of the testicles. There were none of the other evidences of puberty, such as, change in voice, the development of axillary hair and acne.

It is further to be noted that he appeared perfectly well but that the heart was slightly enlarged and that he had an elevated blood pressure for his age.

The laboratory studies were all normal with the exceptions of a possibly slightly lowered blood potassium and the statement that, "a sample of sweat contained more potassium and less chloride per liter than normal."

This brings us to a consideration of the various causes of precocious sexual development in the male.

Pineal tumors may produce precocious sexual development. As a matter of fact precocity is present only exceptionally in tumors of the pineal, and it is now felt that pubertas praecox in pineal tumors is due to pressure exerted by these neoplasms on the contiguous hypothalamic centers and not to a hormone elaborated by the pineal body. This condition seems untenable in our case because of the absence of symptoms of increased intracranial pressure with headache, vomiting, and failing of vision which are almost invariably the first symptoms noted. On the other hand the most important character distinguishing these cases from suprarenal cortex or anterior lobe pituitary disorders is the absence of hypertrichosis. This circumstance isolates this specific hypergenitalism from those related to other ductless glandular dyscrasias. It is interesting to note that Weinberger and Grant collected 17 cases of precocious puberty of whom 3 were females. In all these 17 instances there was disease of the hypothalamus with no evidence of pineal, ovarian, or adrenal pathology. Mid brain tumors were the most common findings associated with this clinical syndrome, although in isolated instances diffuse mid brain inflammatory lesions, such as, encephalitis and non specific inflammations of the brain as well as degenerative encephalopathies were the only abnormalities noted. In these hypothalamic cases there is somatic growth, enlargement of the genitalia with active libido and spermatogenesis.

Although no pituitary tumor has been known to produce precocious puberty or true virilization as its sole manifestation relatively minor virilization symptoms have been observed in association with acromegaly. In pituitary basophilism there may also be precocious puberty but usually associated with the metabolic disturbances characteristic of Cushing's syndrome. It is likely that the virilizing manifestations both in acromegaly and pituitary basophilism are mediated through the adrenal cortex. Experimentally it is entirely clear that the pituitary influences the size of the adrenal cortex considerably. Smith demonstrated that experimental hypohysectomy caused atrophy of the adrenal cortex.

The normal films of the skull with the pituitary fossa intact does not rule out a basophilic adenoma as these are small tumors, but the absence of symptoms pointing to either acromegaly or pituitary basophilism rule out disease of the pituitary gland to account for the precocious puberty in this case, as does the normal blood eosinophile count.

Malignant tumors of the thymus have rarely been associated with precocious puberty. Three such cases were originally reported by Layton, Turnbull, and Bratton and in each instance marked adrenal cortical hyperplasia was found, in addition to a carcinoma of the thymus. The syndrome produced in these patient is indistinguishable from true Cushing's syndrome.

Neoplasms of the interstitial cells of the testis, the so called Leydig's cell tumors are very rare. Only 40 cases have been reported in the literature by the end of 1949. Of these 11 have been in children. Nation, Edmondson, and Hammack found that 21 collected cases were benign and 5 malignant. Malignant tumors have only been observed in adults. They are characteristically small and in several instances they escaped recognition by the patient. In some cases even the physician could not be certain of the existence of a tumor in the testicle. In this event reliance must be placed on the consistency of the testis as compared to that of the other one. It is usually encapsulated.

Clinical manifestations of an endocrine type were present in one third of the reported cases of Leydig's cell tumor. The majority of these were boys with precocious sexual and somatic development. It is important to emphasize that this is a pseudosexual precocity. Since spermatogenisis is absent. The endocrine effects of Leydig's cell tumors are best studied in the afflicted child. Eleven cases in children have been reported in the literature, and it is important to realize that all — presented definite evidence of premature androgenic stimulation, characterized by precocious appearance of puberity. In some, precocious somatic development was also present. The tumor was benign in every case and was accompanied by gynecomas-

tia in one instances. In all cases developmental changes were first noted about the fifth year of life. After orchidectomy regression of sexual precocity occurred completely in two, partially in three and not at all in the remaining cases. Reports of hormone essays in patients with Leydig's cell tumors were very meagre. Urinary gonadotrophin and estrogen have been quantitated in only one case by Masson and regarded as slightly elevated. The urinary 17–ketosteroids were greatly increased in this same case.

Adrenal cortical hyperfunction in the prepubertal period is more common in females than in males. During this period the underlying lesion is usually a tumor, and most frequently a malignant one. The metabolic abnormalities of Cushing's syndrome are often seen in association with adrenal cortical hyperfunction in the prepubital group and generally are associated with mild virilizing manifestations. The question always arises if we are dealing with a tumor of the adrenal cortex, or one of the other conditions already discussed. In the female arrhenoblastomas and other tumors of the ovary have to be considered as well as such rare condition as hyperostosis frontalis interna or polyostotic fibrous dysplasia (Albright's Syndrome).

Constitutional precocious puberty is far more common in females than males. The importance of this condition lies in its differentiation from the pathologic causes of true or pseudosexual precocity. There are no statistics as to the actual incidence of this physiologic syndrome, but it undoubtedly is one of the most common causes of isosexual precocity. In the male there is enlargement of the genitalia and testes, spermatogenesis as well as skeletal precocity.

In the attempt to make an accurate diagnosis we wonder whether we have an instance of over activity of the adrenal cortex due either to simple hyperplasia or to a malignant tumor. In our case the important laboratory tests were made and the only possible abnormalities were a slightly low blood potassium and an elevation of the potassium in the sweat with a lowered sweat chloride. These findings in addition to the body contour, which showed moderate obesity with prominent abdomen and hips, and the slightly elevated blood pressure might indicate a questionable Cushing's syndrome such as occurs in adrenal cortical hyperfunction. But there was no palpable abdominal mass. For the study to be complete there should have been pyelographic studies and possibly perirenal insufflation for attempted visualization of an adrenal tumor.

In would seem logical to assume that an exploratory operation was performed to find a possible adrenal tumor. In hyperfunction of the adrenals in view of the relationship of the adrenal cortex to electrolyte metabolism, notably that of sodium, chloride and potassium one might anticipate that some alterations in the values of these ions might be encountered in patients with cortical hyperfunction. But Willson, Power, and Kepler, in a series of more than 30 cases of Cushing's syndrome 13 of which were due to adrenal cortical tumors, found only three cases in which there were marked changes in the electrolyte pattern of the blood. In regard to the steroids, it is well established that normal men and women excrete both androgenic and estrogenic compounds in the urine. These compounds, however, have their origin not only in the gonads but also in the adrenals. To date, 28 steroids have been isolated from the adrenal. The normal average daily urinary excretion of androgen in the male adult as 17–Ketosteroids is 6.3 to 6.8 mgm. and in the female 4.2 to 5.6 mgm.

The normal values for urinary oxycorticosteroids is from 0.12 to 0.34 mgm. in 24 hours. The values for urinary excretion of 17–Ketosteroids in the various diseases producing sexual precocity in the male are as follows:

Hypothalamus (Pineal .....Normal to +

Testes:

a. Adrenal rests Normal to +
b. Leydig's cell Normal to + + + +

Adrenal Cortex:

a. Hyperplasia + to + + + +
b. Tumor + to + + + +

From this brief review of the possibilities I feel that we must exclude a Leydig cell tumor because of the size of the testes, pituitary basophilism from the X-ray and laboratory studies, involvement of the hypothalamus because of the negative findings of brain pathology. This leaves adrenal cortical tumor or hyperplasia of the adrenal cortex or constitutinal precocity which is rare in the male.

Because of the very slightly elevated Ketosteroids for children one hesitates to make a diagnosis of adrenal cortical tumor. But nevertheless this is my diagnosis:

DIAGNOSIS:

Tumor of suprarenal (probably malignant).
Very poor other possibilities:
Hyperplasia of adrenal cortex.
Leydig's cell tumor.

DR. A. J. FILLMORE

This youngster was apparently well up to about six years of age, at which time it was noted that he began to gain weight rapidly; he developed pubic hair and unusual growth of the penis, all other developmental characteristics and manifestations were normal. Such rapid changes as this boy demonstrated must have been alarming, even to a very proud father.

There are a few other physical findings suggestive of an endocrine disturbance: A blood pressure of 132/96 is high for so young a child. And he had begun to show unusual prominence of the abdomen and the hips. His testes were reported as small.

Apparently there is an over production of the masculinizing hormones and the more common causes for an over production of these are primary hyperplasia of the adrenal cortex or an adrenal cortical tumor.

These disturbances are not common, but are much more common in the female than in the male. It is likely the famous case of Christine Jorgensen, recently reported in the press was such a case.

The principal metabolic actions of hormones, or steroids of the adrenal cortex have been defined as: (1) For the maintenance of electrolyte balance. (2) Regulation of carbohydrate metabolism and (3) Promotion of growth and the development of secondary sex characteristics.

The electrolyte regulating steroid, 11 desoxycorticosterone which is similar to, if not identical with, the synthetic steroid, desoxcorticosterone—causes retention of sodium; chloride; and water, and increases the urinary excretion of potassium and phosphorus.

There are two distinct syndromes attributed to hyperadreno corticisin whether from hyperplasia or tumor. 1st: the adrenogenital syndrone and Cushing's syndrome. It is believed that two different hormones or groups of hormones are responsible for the two syndromes. In order to keep the discussion clear the term *Cushing's syndrome* refers to changes caused by the adrenal cortical hyperplasia and tumors. While the term *Cushing's Disease* refers to those cases in which basophilic adrenomas of the pituitary are present and seem to be responsible for the hormonal changes. When these are absent and the clinical features of the disease are present, the term *Cushing's Syndromes* is applied.

The regulation of carbohydrate metabolism was not disturbed in this youngster as is shown by the fasting blood sugar of 86 mg.% and a non-fasting specimen of 97 mg.%. The process of formation of carbohydrates from the Amino-Acids, glyconeogenesis is governed by the carbohydrate-regulating steroids, of which cortisone, or Compound E is the most widely known.

The most striking changes noted in this young patient are those having to do with the steroids which promotes growth and the development of secondary sex characteristics. And in most cases in males with over activity of the adrenal cortex the primary disturbance consists in excessive secretion of an androgenic hormone. This syndrome of overproduction of the masculinizing steroid varies with the sex and age of the child. The early signs are: enlargement of the penis; scrotum and prostate; the appearance of pubic hair and sometimes facial hair; development of acne and a deep voice. Also a definite increase in height and weight. Our patient certainly had a remarkable growth in his genitals during the interval of nine months, at the beginning of which a routine examination was stated to have revealed no abnormal development. And he had a 20 pound gain in weight during the same period.

It is stated this abnormal growth is not a true sexual precocity because spermatogenesis does not take place. In precocity of hypothalamic origin both penis and testes are enlarged. In sexual precocity of constitutional hypothalamic origin, the urinary 17–Ketosteroids rise only to adolescent or adult levels while in the patient with the adrenogenital syndome they may be far in excess for an adult. In one case of a negro girl with a tumor of the adrenal cortex she excreted 200 mg. per 24 hour before the tumor was removed. After removal the steroid urinary excretion dropped to 2 mg. per 24 hour. Our patient is reported to have excreted 6.6 mg. in 24 hour, which is 3 to 4 times higher than normal for the average of his age. The *increase*

in excretion of 17 Ketosteroids is the most important laboratory feature of this syndrome and in male infants and young children it is necessary for a diagnosis of an adrenogenital syndrome.

One of the most important functions of the adrenocortical secretions is the control of the electrolytes. It is generally agreed the major action of the electrolyte controlling hormone is on the kidney, decreasing the excretion of sodium and increasing that of potassium.

There was no apparent disturbance in the electrolyte equilibrium in our patient as it is reported he had a serum chloride of 103 Milliequiv. per liter; and sodium 140 Milliequiv. per liter both of which are within normal limits. The serum Carbon dioxide was not abnormal.

X-ray studies of bones of hand and wrist, and of the skull gave no evidence of disturbance of growth or bony metabolism.

Also x-ray studies of the chest and of the abdomen were not revealing.

It is my opinion that this youngster whose illness was confined to a nine month interval during which time he demonstrated abnormal growth in body height and weight and also abnormal genital development and growth of pubic hair, along with a definite elevation in 17-Ketosteroids excretion, he had an acquired, or post natal Adrenogential Syndrome. Probably due to a malignant *adrenocortical tumor.* Had the disturbance been due to adreno-cortical hyperplasia the abnormal growth and development of the genitals would have been earlier manifested.

DIFFERENTIAL DIAGNOSIS

Dr. Fuller Albright: This seems like a straightforward case, but one never knows in these exercises.

We know that this patient was producing too much androgen. The rapid somatic growth and the early development of the genitalia are evidence of this. Besides, the 17–ketosteroid excretion was 6.6 mg. per 24 hours, which is very high for a child of this age (normal value, 0 mg.). There are two tissues in the body that produce androgen: the reticular cells of the adrenal cortex and the Leydig cells of the testes. We therefore expect to find some disorder in one of these two tissues.

I will first discuss the reticular cells of the adrenal cortex. The first possibility I would consider is a tumor, benign or malignant, of the adrenal cortex. Everything in this case is compatible with such a diagnosis. The rather short duration and rapid progress of the symptoms favor this diagnosis over some of the others, and this would be my first choice. Furthermore, by the law of averages I favor a malignant tumor. In my experience most of these tumors have been left-sided; so I would guess a left-sided tumor.

The second possibility I would consider is hyperplasia of the reticular cells of the adrenal cortex. This is a very interesting condition. It occurs mostly in females, and there is often a family history in the siblings. The typical story in females is usually as follows: together with certain characteristic changes in the external genitalia, the child is born with a large clitoris; she grows normally for the first one to eight years; she then develops axillary and pubic hair and grows rapidly, which suggests that androgen is being produced in excess somewhere in the body; finally, because of early epiphyseal union secondary to the excess of androgen, she stops growing at an early age. The net result is that her final height is about normal.

The reticular cells of the adrenal cortex have an interesting life history as worked out by Dr. Sam S. Blackman, Jr. The fetal reticular zone is well developed and apparently functioning; in the first two weeks of postnatal life it retrogresses but leaves behind some cells that give origin to the postnatal reticular zone; these cells lie dormant until about puberty, when they again show signs of activity and produce reddish-brown granules.

The life history of the reticular zone in cases with hyperplasia of the reticular cells is modified. In the first place the fetal reticular zone is increased; in the second place the cells that give rise to the adult reticular zone lie dormant only one to eight years, rather than up to the usual time of puberty.

We are now in a position to interpret the clinical manifestations. The anatomic changes at birth are undoubtedly the result of increased adrogen production by the hyperplastic fetal reticular zone; the failure of axillary and pubic hair to develop in the first few months is due to the latent period when the fetal reticular cells lie dormant; finally, the rapid growth of axillary and pubic hair and of the external genitalia, if it does occur, is evidence of the recrudescence of the reticular cells.

The reticular-cell hyperplasia not only is much less frequent in the male but also runs a somewhat different course. It is very apt to be associated with Addison's disease, because of the encroachment of the reticular cells on the other layers of the adrenal cortex.

Against the diagnosis of hyperplasia in this particular case are the failure of the genitalia to be enlarged at birth and the absence of any clinical or laboratory findings suggesting Addison's disease (for example, the serum electrolyte values and electrolyte values for sweat). On the other hand the onset of pubic hair and of rapid growth at six years of age is about the right time one would expect if this were the diagnosis. Furthermore, there must be cases in the male in which the activity of the fetal reticular zone is not sufficient to cause noticeable enlargement of the male genitalia. Fnally, there must be male patients who do not have Addison's disease. Adrenocortical hyperplasia is my second choice.

I will now turn to possible disorders of the Leydig cells. First, a word about testicular function: the hypothalamus, by way of a neurohumeral pathway, stimulates the anterior pituitary body to release follicle stimulating hormone (FSH) and lutenizing hormone (L.H.) These hormones, in turn, stimulate the testes, FSH leading to tubular development and LH controlling production of testosterone by the Leydig cell.

The first possibility we might consider here as a cause of increase in androgen production is a tumor of the Leydig cells themselves. This is very rare. No such tumor was felt. In the only case I know of with this diagnosis, the 17-ketosteroid excretion was over 1000 mg. as compared with 6.6 mg. per 24 hours in this case. I think we can dismiss this diagnosis as possible but unlikely.

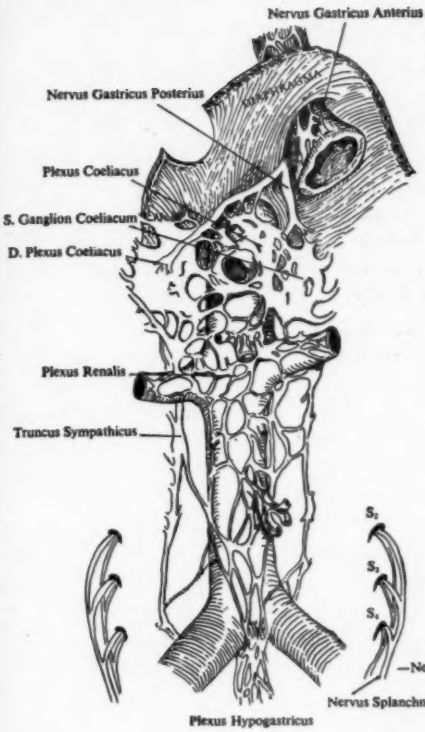
One might consider a tumor of the pituitary body giving off too much LH. Such a diagnosis would seem reasonable, but I never heard of a pituitary tumor that did this.

The next possibility to consider is a disturbance in the hypothalamus, releasing FSH and LH and stimulating all functions of the testes. One meets this condition in the so-called "pineal syndrome." It is initiated, not by the hormone of the pineal body, but by any tumor in the region of the pineal body. Against such a diagnosis in the case at hand is the failure of the testes to be enlarged. The size of the testes is dependent almost entirely on the size of the tubules, and in the pineal syndrome development of the tubular, as well as the Leydig cells, occurs. There are no findings to suggest an intracranial lesion, and I think we can dismiss this diagnosis.

Finally, one comes down to the possibility of a selective overproduction of LH without FSH. This might cause stimulation of Leydig cells without stimulation of tubules. I had never heard of such a syndrome until recently when Dr. Nathan Talbot mentioned it. I leave this for him to discuss. Such a diagnosis would seem to be compatible with the findings in this case, and I might put it down as a third choice.

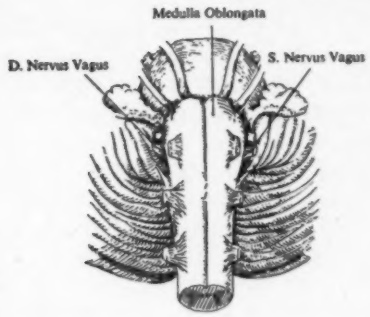
It is now the vogue to divide adrenocortical hormones into three functional types, one for each layer of the gland. The innermost reticular layer is thought to produce the gluconeogenic, "sugar" or "S" hormone; the outermost glomerulosa layer is thought to produce the salt and water, sodium or "Na" hormone. It may be of interest to see what evidence there is for overproduction of each one of these hormones by the tumor that I have diagnosed. We have already discussed the androgenic hormone. Against overproduction of the gluconeogenic hormone are the failure of the eosinophils to be decreased, the normal value for 11-17 corticosteroids and the rapid growth. In favor of some overproduction of the "na" hormone is the hypertension and the low chloride and high potassium values in the sweat. It would seem, therefore, that this tumor was producing a large amount of androgenic hormone, a normal amount of the gluconeogenic hormone and a slightly increased amount of the "Na" hormone.

Dr. Nathan B. Talbot: Our preoperative diagnosis was the same as that just given by Dr. Albright. In the differential diagnosis the condition of greatest interest was a syndrome that we have now seen in a number of young boys. It is characterized by precocious masculinization, starting in early life. The testes are of normal size for age. The urinary 17–ketosteroid output is either normal or slightly elevated, and the urinary gonadotropin (FSH) assay is apt to be negative for 3 and 6 mouse units per 24 hours. Exploration of the adrenal glands of such patients fails to reveal either a tumor or bilateral hyperplasia. On the other hand, testicular



Abdominal autonomic plexus (sympathetic)

Central origin of the vagus nerves (parasympathetic)



Control of Gastric Motility and Spasticity in Peptic Ulcer with Banthīne®

"The need[1] for suppressing gastric motility and spastic states is . . . fundamental in peptic ulcer therapy. Since the cholinergic nerves are motor and secretory to the stomach and motor to the intestines, agents capable of blocking cholinergic nerve stimulation are frequently used to lessen motor activity and hypermotility."

Banthīne[2] "has dual effectiveness; it inhibits acetylcholine liberated at the postganglionic parasympathetic nerve endings and it blocks acetylcholine transmission through autonomic ganglia."

It has been shown[1] to diminish gastric motility and secretion significantly as well as intestinal and colonic motility.

The usual schedule of administration in peptic ulcer is 50 to 100 mg. every six hours, day and night, with subsequent adjustment to the patient's needs and tolerance. After the ulcer is healed, maintenance therapy, approximately half of the therapeutic dosage, should be continued for reasonable assurance of nonrecurrence.

Banthīne® (brand of methantheline bromide) is supplied in: Banthīne ampuls, 50 mg.—Banthīne tablets, 50 mg.

It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association.

1. Zupko, A. G.: Pharmacology and the General Practitioner, GP 7:55 (March) 1953.

2. McHardy, G. G., and Others: Clinical Evaluation of Methantheline (Banthīne) Bromide in Gastroenterology, J.A.M.A. *147*:1620 (Dec. 22) 1951.

SEARLE Research in the Service of Medicine

biopsy reveals marked development of the interstitial cells of Leydig without more than minor evidences of testicular tubular development. It is believed that the precocity is due to a production of androgenic hormones by the Leydig cells and that these in turn have been precociously developed and activated by pituitary interstitial-cell-stimulating hormone (ICSH). It is further believed that the pituitary body has been activated to ICSH production by some sort of hypothalamic disturbance. Since most of these patients have shown no neurologic evidences of an intracranial lesion, it seems probable that the hypothalamic disturbance is of a functional nature rather than an organic, structural defect. Parenthetically, it may be added that the testicular interstitial cells occupy but a small volume; hence, it is possible for extensive interstitial-cell hyperplasia to occur without a clinically definite increase in gross testicular size. It is growth of spermatic tubules that accounts in the main for the increase in testicular size during adolescence.

So far as testicular size and masculine development were concerned, the patient under consideration corresponded to patients with the condition just described. On the other hand, he differed in the age at onset of precocity, which in his case was much too late for the above syndrome. He also differed in water and electrolyte status, for he had signs (questionable edema of the face, slight hypertension and cardiac enlargement) suggestive of a pathologic increase in the production of adrenocortical hormones of the type that cause sodium and water retention and potassium diuresis. To gain some objective information concerning the present patient's adrenocortical "Na-K" hormone status, Dr. William Locke applied a sweat electrolyte test on which he has been working recently. It might be interesting to hear the results of these studies.

Dr. William Locke: Methods for estimating the rate of secretion of the "Na-K" hormone are not so satisfactory as the methods for the other cortical hormones, as Dr. Albright and Dr. Talbot have said. In this case the hypertension may have indicated some overproduction of that hormone. The patient did not have hypochloremic alkalosis, which is sometimes associated with Cushing's syndrome and which has been attributed to an overproduction of the "Na-K" hormone in that condition. We have been studying variations in the electrolyte concentrations in sweat, with a view to using them as an index of "Na-K" hormone production. This subject was first studied by Dr. J. W. Conn, who showed that desoxycorticosterome acetate has somewhat the same effect on sweat as it has on urine composition—that is, it reduces the concentration of chloride and sodium, and increases the concentration of potassium. In this case the sweat chloride was 10.0 milliequiv., and the potassium 13.2 milliequiv. per liter. Under the conditions of this test one would expect the chloride concentration in the sweat from a normal child to be perhaps three times what it was in this case and the potassium concentration to be approximately half what it was in this case. So we considered our findings to be suggestive evidence of an excessive production of the "Na-K" hormone.

CLINICAL DIAGNOSIS

Carcinoma of adrenal cortex.

DR. ALBRIGHT'S DIAGNOSIS

Carcinoma of adrenal cortex.

ANATOMICAL DIAGNOSIS

Carcinoma of adrenal cortex.

PATHOLOGICAL DISCUSSION

Dr. Oliver Cope: This patient had a tumor of the adrenal cortex. Why were the roentgenograms reported as showing no evidence of a tumor? The answer is that the tumor was small, not more than 3 cm. in its greatest diameter and scarcely large enough to cast a shadow. The roentgenograms were excellently clear, and a shadow was present on either side just above the kidney consistent with that case by the adrenal gland. The shadow on the right was denser than that on the left. In making the incision we anticipated that if a tumor were present it would be on the right side. This proved to be the case.

It is a curious thing, as Dr. Albright has pointed out, that the overwhelming majority of the hyperfunctioning adrenocortical tumors we have encountered have been on the left side. Left-sidedness to me makes no sense so I am always equally suspicious of the right. This is the second right-sided tumor of our series. Left-sidedness is presumably a statistical fluke and I suspect that with time and increased experience the left-sided predominance will also disappear.

Careful search was made at operation for evidence of malignant spread of the tumor. Grossly, the capsule of the tumor was unbroken. No

invaded lymph nodes were encountered. The tumor was excised in toto.

The tumor was transected after removal at the operating table. On the gross examination I made a diagnosis of cancer because of the unevenness of consistence in one area and distortion of the stroma. These gross findings have been present in other malignant adrenocortical tumors and consistently absent in the small, apparently benign, tumors that have been resected from patients with Custing's disease. My experience is too limited for me to be certain but I have a hunch that in such tumors the gross pathology is more reliable than the microscopical. I am therefore fearful of recurrence in spite of my negative search for lymph-node metastases.

Dr. Tracy B. Mallory: The tumor was a well encapsulated nodule of quite variable color with many bright-orange-yellow spots in it, indicating that in portions of the tumor considerable lipoids were present. The microscopical section showed a very variable picture. Cells could be found that corresponded to all the various layers of the adrenal cortex. There were numerous lipoid-filled cells corresponding to the fascicular layer, and also many of the big rather homogeneous eosinophil cells that are found in the reticular layer. There was not a great deal of pigment in the cells in this case. The question comes up whether this tumor was benign or malignant. Encapsulation wound be in favor of its being benign. In some parts of the tumor very atypical cells with giant multiple nuclei were found, which anywhere else in the body would certainly be evidence of a highly malignant tumor. Our experience in adrenal tumors has indicated that marked cellular atypicality of this type may be present in tumors that run a benign course. I think it very probable that if these slides were shown to a group of pathologists they would split fifty-fifty as to whether it was benign or malignant. My impression is that the outlook is relatively favorable although we did call it carcinoma. That may perfectly well be an error.

DIFFERENTIAL DIAGNOSIS IN THE RHEUMATIC DISEASES

From the number of papers appearing in the current literature, this is still a bothersome question, not yet entirely solved by the research departments of the pharmaceutical houses, though some of their literature would almost lead us to think so.

Charley J. Smith, M.D., Denver, Colo., has a very excellent paper in the Rocky Mountain Medical Journal of January, 1953, confined to the differential diagnosis, the only comment on treatment being that "with the discovery and introduction into medical practice of Cortisone and ACTH, which are profoundly beneficial in a variety of rheumatic diseases, it has become more important than ever to establish an exact diagnosis in the early stages of these diseases . . ."

He discusses rheumatoid arthritis and rheumatic fever, degenerative vs. rheumatoid arthritis (with a diagnostic table), special types of rheumatoid arthritis, infectious arthritis, Reiter's syndrome, acute gout, traumatic arthritis. W.W.W.

INTERNATIONAL ACADEMY OF PROCTOLOGY

The International Academy of Proctology announces the establishment and award of a one year Proctologic Research Fellowship in the amount of $1200.00. This Research Fellowship grant has been awarded to the Jersey City Medical Center, New Jersey, to be administered under the direction of Dr. Earl J. Halligan, Surgical Director of the Medical Center.

Dr. Halligan is a former International President of the Academy. The Board of Trustees of the International Academy of Proctology will vote another Fellowship grant of a similar amount at the time of the next Annual Meeting of the Academy. Thus, there will be at least two Research Fellowship studies in progress, in different institutions, under the auspices of the International Academy of Proctology.

MEETING NOTICE

1953 Annual Convention of the National Society for Cripled Children and Adults, Nov. 12-14, Chicago.

The PRESIDENT'S Page

Through a series of coincidences I gained knowledge this summer of the existence of Spears Chiropractic hospital in Denver, and predict that you will hear more about it. A Tucson physician sent me a many-paged advertisement given him by a patient, made up in newspaper form of testimonials telling of "cures" where other medical and surgical skill had failed. Cancer, polio, multiple sclerosis and numerous other scourges are "cured or remarkably improved". While in Denver one newspaper reported that the wife of a Texas utilities man suffering from advanced cancer was transfered by special train from an eastern medical school to Spears and on advice of the attending chiropractor the special coach and engine made the last part of the trip from Chicago alone because she was in much pain.

I drove around the Spears grounds. It is already a big outfit and additional units are being built in series, probably to accommodate as many as 1,000 patients. Testimonials indicate that patients are being referred by chiropractors from all sections of the country. Tax litigation is in progress, the city maintaining the institution is being operated for profit.

The joker in this is that the physical set-up at first glance might pass for a VA hospital. This thought may have crossed the minds of the builders and the nation's chiropractors. The Denver papers during late August carried a few stories on an inside page about hearings being conducted by Senator Langer (Rep.) of North Dakota, chairman of a senate investigating sub-committee, who opened his Denver phase of committee investigation into an alleged "medical monopoly" and what he called the "conspiracy on the part of the press and the medical profession to discredit the practice of chiropractic." Senator Langer demanded that the VA provide ex-servicemen with chiropractic treatment at tax-payer's expense, denounced the A. M. A. for its stand against indiscriminate hospitalization for veterans with non-service connected disabilities, said he favored expansion rather than reduction of VA services by inclusion of chiropractic, and blasted the press for not giving his remarks front page space equal to that of Dr. McCormick's address before the Rocky Mountain Radiological Society. The Honorable Mr. Langer was a patient "incognito" for eleven days prior to the hearings, and according to Dr. Leo Spears "improved considerably." Testimony was taken from chiropractic "benefited" veterans suffering from "polio, multiple sclerosis and nerve disorders" by Mr. Langer, the lone member of the committee present at the hearings.

Edward M. Hayden, M.D.
President

Editorial

ARIZONA MEDICINE

Journal of

ARIZONA MEDICAL ASSOCIATION, INC.

VOL. 10 OCTOBER, 1953 NO. 10

CONTRIBUTORS

The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

Certain general rules must be followed, however, and the Editor therefore respectfully submits the following suggestions to authors and contributors:

1. Follow the general rules of good English, especially with regard to construction, diction, spelling, and punctuation.
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. (See MEDICAL WRITING by Morris Fishbein.)
3. Be brief, even while being thorough and complete. Avoid unnecessary words. Try to limit the article to 1500 words.
4. Read and re-read the manuscript several times to correct it, especially for spelling and punctuation.
5. Submit manuscript typewritten and double-spaced.
6. Articles for publication should have been read before a controversial body, e.g., a hospital staff meeting, or a county medical society meeting.

The Editor is always ready, willing, and happy to help in any way possible.

HOSPITAL BEDS

The magnificent new St. Joseph's Hospital adds more than 100 hospital beds to the total number in Phoenix. Good Samaritan Hospital is in the process of adding more. If the old St. Joseph's Hospital is used in part a group of more than 100 beds will be added.

But still there may be a shortage, a shortage which surely will increase as the population grows – as it certainly will.

The physicians can make a real contribution to the solution of this problem in two ways:

1. Do not enter patients into hospitals without sufficient reason.
2. Dismiss patients from the hospital at the earliest possible safe and satisfactory time.

There can be no doubt that at times the physician is put under considerable pressure to hospitalize patients who could do as well at home. This is especially true when patients have hospitalization insurance. But it is the responsibility of the physician to decide the need for hospitalization and not that of the patient nor the patient's family. And, in general, it is best to keep the patient at home during any illness which will respond equally well to home treatment.

It is hardly questionable that many patients are allowed to remain in the hospital for one or a few or even many days after they could properly be sent home. This is usually the doctor's fault, and may at times be due to sheer carelessness. Many hospital bed days could be saved by prompt dismissal of patients.

As pointed out above, the physician's problem in this regard is not always an easy one. If, however, he will keep constantly in mind the goal of using no more hospital bed days than necessary, he will perform a notable public service.

NOTICE

ALL CONTRIBUTORS OF ARIZONA MEDICINE SHOULD HAVE THEIR MATERIAL IN THE JOURNAL OFFICE NOT LATER THAN THE 10th OF THE MONTH PRIOR TO PUBLICATION IN ORDER TO HAVE ARIZONA MEDICINE REACH ITS READERS ON OR BEFORE THE 10th OF THE MONTH

Material arriving after that date will be published the following month.

Arizona Pharmaceutical Page

THE SECOND CENTURY – 1852-1953

AS WE GLANCE BACK OVER THE PAST CENTURY OF OFFICIAL OPERATION OF PHARMACY IN THIS COUNTRY, THROUGH ITS PARENT ORGANIZATION, "THE AMERICAN PHARMACEUTICAL ASSOCIATION," WE ARE AMAZED AT THE TREMENDOUS ADVANCES OUR PROFESSION HAS BEEN PRIVILEGED TO PARTICIPATE IN. AS THE YEARS HAVE PASSED DURING THIS CENTURY OF PROGRESS WE HAVE SEEN UNTOLD CHANGES IN OUR SOCIAL AND ECONOMIC ORDER. THIS PRESENT GENERATION HAS LIVED AND IS LIVING THROUGH SOME OF THE MOST MOMENTOUS OF THESE CHANGES.

JUST HOW WE HAVE PROGRESSED IN THE 100 YEARS IS EVIDENT ALL ABOUT US. THE SINGLE PHARMACIST AND HIS APPRENTICE WORKING IN THE SHOP OF 1852 NOT ONLY AS COMPOUNDERS OF PRESCRIPTIONS BUT ALSO AS SMALL-SCALE MANUFACTURERS OF THE PREPARATIONS PRESCRIBED HAVE BEEN REPLACED BY A VERITABLE ARMY OF SPECIALISTS IN PHARMACY, PHARMACEUTICAL CHEMISTRY, PHARMACOLOGY, BACTERIOLOGY AND THE MANY OTHER CONTRIBUTORY ARTS AND SCIENCES. THESE NEW PRACTITIONERS HAVE RECEIVED THE MOST THOROUGH TRAINING IN THEIR PROFESSION. IN THE STATE OF ARIZONA A PERSON STARTING IN THE PROFESSION OF PHARMACY MUST SPEND A MINIMUM OF SIX YEARS IN THE STUDY OF IT BEFORE BEING ELIGIBLE TO BECOME LICENSED TO PRACTICE.

HIS COLLEGE REQUISITES INCLUDE ONE YEAR OF PRE-PHARMACY AND FOUR YEARS OF THE PROFESSIONAL COURSE LEADING TO THE BACHELORS DEGREE. FOLLOWING THIS THE APPLICANT IS REQUIRED TO COMPLETE ONE YEAR OF INTERNSHIP, UNDER THE SUPERVISION OF A PRECEPTOR PHARMACIST.

ORIGINALLY PHARMACY AND MEDICINE HAD A COMMON ORIGIN, GRADUALLY SPLITTING INTO TWO WELL DEFINED PROFESSIONS. AS SCIENTIFIC KNOWLEDGE DEVELOPED, IT BECAME INCREASINGLY DIFFICULT FOR ANY SINGLE GROUP TO KEEP PACE WITH PROGRESS IN ALL PHASES OF THE HEALTH FIELD. TODAY WE RELY ON THE PHARMACIST TO DEVELOP AND PREPARE THE MEDICINES REQUIRED TO MEET THE NEED SHOWN BY THE PHYSICIAN'S DIAGNOSIS.

BUT ALL OF THIS IS PAST HISTORY – WHAT OF THE FUTURE? IF WE ARE TO JUDGE THE COMING CENTURY IN THE LIGHT OF THE PROGRESS MADE DURING THE PAST CENTURY WE MUST HAVE A VIVID IMAGINATION AND BE ABLE TO VISUALIZE UNHEARD OF ACCOMPLISHMENTS. EIGHT YEARS AGO WE WERE PERMITTED TO DISPENSE PENICILLIN; THREE YEARS AGO WE RECEIVED OUR PORTION OF STREPTOMYCIN; EIGHTEEN YEARS AGO WE RECEIVED A STOCK OF SULANILIMIDE; TWO YEARS AGO CAME ACTH AND CORTISONE. WE COULD GO ON AND ON WITH A LISTING OF THE HORMONES THE ANTIHISTAMINES THE NEWER ANTIBIOTICS ETC. NEEDLESS TO SAY THE DISCOVERIES AND ADVANCES MADE WITHIN THE PAST TEN YEARS HAVE OVERSHADOWED ALL THOSE MADE IN THE PAST. AS WE CONTEMPLATE THE ADVANCES AND DISCOVERIES WHICH WILL BE MADE IN THE COMING CENTURY OUR IMAGINATION IS REALLY STAGGERED. YOUR DOCTORS WILL HAVE AVAILABLE WITHIN A VERY SHORT TIME MEDICATIONS TO SUCCESSFULLY TREAT MOST OF THE PRESENTLY KNOWN DISEASES. YOU MAY REST ASSURED YOUR PHARMACIST WILL HAVE KEPT ABREAST OF THE ADVANCES AND WILL BE READY TO SERVE YOUR NEEDS AS THE TIME ARISES.

TOPICS OF *Current Medical* INTEREST

RX., DX., AND DRS.

By GUILLERMO OSLER, M. D.

Dr. Arthur Kemmerer, professor of nutrition at the U. of A. College of Agriculture, gave a talk before the American Dietetic Ass'n. in Los Angeles. He is a member of the U. of A. arthritis research group. . . . His major comment concerning the use of ACTH and CORTISONE has not been generally publicized, and seems worth a mention here. Persons with ARTHRITIS apparently do not use PROTEINS in a normal manner. Use of the drugs enables them to metabolize protein, and the symptoms subside during that period. . . . On this subject, mas des pues.

The recently publicized 'DAILY DOUBLE' treatment for TB is double talk. . . . It came from Denver in September and is much the same as if a new, jazzy name for aspirin had been invented. The treatment (isoniazid, etc., plus gradual rehabilitation) is what most everyone else is using. The Denver people eliminate excessive bedrest, but continue therapy for 16 to 18 months . . . . The authors are Dressler and Middlebrook, and they must have a good publicity agent. It may be only coincidence but the name of the lab at the National Jewish Hospital is the 'Hearst Research Laboratories'. . . . Believe it or not, this is the same outfit which stirred up the hopeful last winter by saying that they were decreasing rest to as little as 1 to 3 months. Sanatoria would become obsolete. They back-tracked when investigated by the N T A. . . . This barefoot country Osler holds that such conduct ain't fair.

A further test of antibiotics for INTESTINAL AMEBIASIS has been made at Louisiana State by McHardy and Frye. . . . Terramycin leads the pack (91.5% success in 435 cases). Fumagillin, with its narrow spectrum and direct action is next (86% of 119 cases). Aureomycin cleared 83.4% of 697 cases. . . . It should be emphasized that extra-intestinal lesions (e. g., liver abscess) are not affected by the AB drugs.

Our old friend, the Florida Citrus Commission, sends out a flash bulletin about teen-agers. Their diets are deficient in VITAMIN C, from the rock-bound coast of Maine (Dr. Mary Clayton) to the sunny slopes of Texas (Dr. Pauline Mack). . . . The Commission has its own solution of course, but how about an Arizona angle? Send all the kids to school in Arizona and we will fill them up (6 to 8 ounces every morning, same like Florida) with Arizona orange juice. . . . The gums need Vit. C, they say, and it helps make the cells (as they say in Milwaukee) "togedder schticken".

HEMOPHILIA is rarely seen in general practice. Surgery and other bloody procedures are usually feared and avoided. A recent description of bloodless DENTAL EXTRACTION is of some interest, and you'd hardly ever guess how it is done. . . . A rubber band is fitted tightly around the tooth. It gradually works its way down below the gingival margin and toward the end of the root. The tooth loosens and falls out, after periods ranging from 4 to 200 days. . . . No mention was made of a pain factor.

DR. ALVAREZ SAYS,—That he finds the evidence contradictory as to why some persons are long lived. . . . The Dunbars reported at St. Louis that longevity does not seem to be inherited. They studied the 300 cases of the 1500 White Americans who had lived over 100 years. . . . Dr. A. quotes the late Dr. Raymond Pearl, a great authority on the subject, who believed that if a man could choose his ancestors he could be sure of a long life. . . . Homologous twins often live lives which are nearly the same length. They are like 'duplicate clocks, wound to the same degree of tightness, which run down and stop at the same time'.

CYCLONES of the recent summer gave several HOSPITALS an acid test. They stood up well and learned a lot, some of it fast. . . . Providence Hospital in Waco, Texas, has 250 beds. They were presented with 215 cyclone victims in 2 hours. They admitted 115 and treated 100 as OPDs. Fifty of the latter were turned over to Connall Air Base hospital thru some fine civilian-military cooperation. . . . St. Joseph's Hospital of Flint, Michigan, also has 250 beds, but had a pre-cyclone census of 262. They gave first aid to 120 patients, admitted 78, and took 110 x-rays in one night. The success of the Flint operation was obtained by alerting the employees, gathering all of the staff, and calling in as many ex-employees as possible.

Ravits of St. Paul discusses 'DERMO-FUNGOUS ALLERGY' in MINNESOTA MEDICINE. He agrees with the work of Bloch and Jadassohn, who explain the sequence which can follow a trichophyte infection. . . . A person has a fungus infection (athlete's foot); he recovers; a generalized allergy develops to its height a few weeks after healing; it gradually declines thereafter; a person may react to the fungus or its products by skin reactions ('ids'). The lesions may be less violent and more eczematoid. . . . Skin-testing with an allergen (trichopytin) may be helpful in

NOT FOR PROFIT

THE HOSPITAL BENEFIT Bulletin

Special Published Bi-Monthly by the Hospital Benefit Association, First Street at Willetta, Phoenix October, 1953

Question QUIZ
Do you know the answers?

Q. Can doctors help expedite processing of claims?

A. Yes. In fact, the Association wants to pay claims quickly. It will do so if doctors will fill out and return promptly the claim form sent them by the Association.

Q. What standard does the Association use in paying fees?

A. The Association bases its schedule of benefits on the schedule which is used by the Arizona Industrial Commission and which was approved by a committee representing the Arizona Medical Society.

Q. Does the Association pay surgical fees to osteopaths?

A. No. Member benefits are paid only to licensed physicians (M.D.'s).

Q. May HBA members choose their own hospitals and doctors?

A. Yes. Member benefits are paid to any licensed hospital or physician (M.D.) anywhere in the world.

Q. Does the Association make an attempt to set the surgical fee?

A. No. This important decision is left entirely to the doctor and his patient. The actual cost is paid by the Association up to the amount shown in the schedule of fees.

Q. How does the doctor charge the Association for an X-ray?

A. He merely lists the charge for the X-rav on the claim form along with his own charges.

Q. Why does the Hospital Benefit Association have such a low rate of questionable claims?

A. The low rate is due to the fact that enrollment is handled properly by well-trained personnel. Members know just what benefits to which they are entitled.

HBA Surgical Plan Pays For Accident Treatment In Physicians' Offices

Doctors have been generous in their praise of the Hospital Benefit Association's Surgical Plan which contains many broad, generous benefits not offered in most other plans. They especially seem to like the fact that the Association pays for emergency treatment of accidents whether it is in the doctor's office, at the scene of the accident or in the patient-member's home. Of course, such treatments must be made within 24 hours of the accident. If X-rays for fractures, dislocations or for locating foreign bodies are required, as the result of an accident, the Association will pay for one X-ray, regardless of whether the X-ray is made at the doctor's office or at an X-ray laboratory.

Emergency accident treatment is included in the HBA Surgical Plan because the Association realizes the importance of this provision to both doctor and patient. Everyday accidents — the kind that are most likely to happen to anyone at anytime — often do not require hospitalization but can be treated at the doctor's office. By including this provision, the Association enables many people to go to the doctor for minor injuries which otherwise might be neglected until they become serious.

Doctors Commend HBA TV Newsreel

The Association is pleased to report it has received many favorable comments from doctors on its TV show, the HBA Newsreel. This half-hour program, featuring noteworthy current news events, is telecast every Monday at 8:30 P.M. on KTYL-TV, Channel 12.

"Let him yelo — don't spoil him because he's an only child."

Generous Benefits

Surgical fees are paid for members by the Association for fractures, dislocations. wound repairs and even examination of a suspected injury as the result of an accident. The HBA Surgical Plan also includes benefits to cover such non-surgical accident treatment as removal of a foreign body from a patient's eye, insect stings, accidental poisoning, etc.

X-rays in the Doctor's Office

Fees paid for X-rays of accidental injuries, whether they are made in the doctor's office or at the laboratory, range from $6.00 to $45.00, depending on the type of X-ray. This schedule of fees is based on the schedule which is used by the Arizona Industrial Commission and which was approved bv a committee representing the Arizona Medical Society.

Simple Form Saves Time

The claim form which the Association sends the doctor is very popular because of its simplicity. It eliminates the red tape often encountered in establishing claim data. The doctor merely fills out the short form, listing his diagnosis, treatment, charges and answers a few simple questions.

diagnosis, but is rarely of use in desensitizing. Treatment must usually consist of dull local applications.

It seemed a good idea to write a comment on the newest DENTAL PROTECTIVE PROCEDURE. The Sat. Eve. Post had a wide-eyed article on the ANTI-ENZYME approach, described by its Chicago originators as fabulous and amazing, as well as a continuous barrier to decay. . . . This merry-go-round is the same one we rode on 3 years ago ('ammoniated') and about 2 years ago ('chlorophyll'), so we were all ready to look with a jaundiced eye, when crash boom! whee! out came full page newspaper ADVERTISEMENTS referring to the article in THREE magazines. They all had just happened to be about anti-enzymes. . . . The ad also just happened to be about Antizyme, a new dentifrice by Listerine. The Lamberts ride again! . . . So we grabbed the brass ring and bought a tube, not for protection or science, but just to see how it tastes. . . . Mint.

The English feel that isoniazid offers a special help in TUBERCULOSIS OF THE KIDNEYS (Dick, in The Lancet). It is given credit for producing 'patholytic' miracles which most Americans have not yet admitted. . . . Caseation is said to be absorbed, lesions vascularized, and fibrosis prevented in the surrounding area. This is a reversal of the usual TB process. . . . They stress that "none of the antituberculosis drugs should be used ALONE."

Another new anti-TB drug is still too young to be well studied. The material is called HES, for hydroxethyl sulfone. It was synthesized by the National Institutes of Health Laboratories, and studies by Payne and colleagues of Howard University in Washington, D. C. . . . The place of HES in therapy, or its relationship to other drugs, or its relative toxicity is not certain enough for us to trifle with. . . . Hold off. Wait and see.

..STREPTOMYCIN sometimes produces a violent allergic reaction. In theory the drug should have been given on a previous occasion, but the patient denies it, or can't remember it, or doesn't know about it. . . . The latter case may have occurred when a double-drug combination was given as a shotgun therapy for some sore of infection. . . . There is a lot of evidence against the use of two drugs, especially when it is needless or careless, and especially when they are called by some cryptic trade name. Use 'em simple, we say, unless absolutely indicated, and that includes SM.

Drs. Clarke, Zahn, and Holmes of Seattle believe they have proof that A GOOD SCARE may help TUBERCULOSIS to heal. . . . They have clinical evidence that fright has seemed to turn the tide in many cases. They intend to use the method for a trial, and to further correlate the relations of fear and TB and the adrenal gland. . . . Chemical tests of adrenal activity have been somewhat correlated with mental states, but the main work remains to be done. . . . We expect to see Dr. Zahn in Utah soon, and will find out the progress.

Dr. Frank Meleney, the antibiotic man from New York, sometimes plays a guest-spot in this journal. . . . He has recently clarified the BOIL AND CARBUNCLE situation, especially for the non-surgeon who hesitates at direct, local therapy. . . . Penicillin or bacitracin may be injected into the CENTER of furuncles and carbuncles. It also can be placed in the periphery of a wide zone of induration which may be present around the latter, in combination with a local anaesthetic, just as has been done by pioneers in the past couple of years.

RESINS have been described which absorb various electrolytes from the intestinal tract. They now sell one ('Resion', by The National Drug Co.) which is supposed to DETOXIFY. . . . It is composed of polyamine methylene resin and two aluminum silicates. It is said to be effective in diarrhea, and in gastroenteritis, and in the nausea and vomiting of pregnancy. They use the term 'polyphasic absorbent'. . . . It sounds reasonable in this day and age, but data are not sufficient for comparison with the simple kaolin-pectates, etc., nor whether the stuff may pick up too many chemical items.

A recent story in this column about a Los Angeles and a San Francisco chest surgeon has smoked out another 'gay' story. It concerns Dr. B., a Los Angeles surgeon who also is well-known in Arizona. . . Dr. B's family has two cats. The 'outside cat' was hit by a car, taken to a veterinarian's and recovered except for a diaphragmatic hernia. . . . The vet was so delighted at this finding that he kept the cat for days and weeks. Mrs. B. called repeatedly, and the cat was always about to have another x-ray. She was told that the cat needed an operation, to which she replied that her husband did that sort of thing. One remark led to another, and the impasse was broken only when Mrs. B. arranged to get the cat home by allowing the vet to 'scrub' for Dr. B. during the hernia repair!

Woman's AUXILIARY

THE PLEDGE OF LOYALTY TO THE WOMAN'S AUXILIARY

I PLEDGE MY LOYALTY AND DEVOTION TO THE WOMAN'S AUXILIARY TO THE AMERICAN MEDICAL ASSOCIATION. I WILL SUPPORT ITS ACTIVITIES, PROTECT ITS REPUTATION AND EVER SUSTAIN ITS HIGH IDEALS.

This pledge was adopted at the annual convention in Chicago in June 1943.

What is loyalty? There is probably no word in the English language more widely used. But do we appreciate its full meaning? Being true to one's inmost self and acting accordingly is loyalty. Webster says it is "Fidelity to a superior or to duty, allegiance, homage." The loyalty and allegiance of the Woman's Auxiliary is to the medical profession.

From the time of its organization in 1922, the membership of the Auxiliary has steadily increased, and the importance and scope of its activities in the advancement of health have become broader and more varied. It is the function of the Woman's Auxiliary, under the direction of the American Medical Association, to aid in the promulgation of those principles which will improve public health. Also, it is important that it be realized that one of the chief objects of the Woman's Auxiliary, when it was organized, was to promote friendliness among physicians' families.

Today there is need, as never before, to adhere to and to promote the objectives for which we stand as an Auxiliary to the American Medical Association. We should assume our share of responsibility for safeguarding the ideals of American Medicine at all times and under all conditions.

As an Auxiliary we should look to our advisers for direction and remember that, as an organization, we have a oneness of purpose which is definite and impersonal, yet at the same time unobtrusive and regulated. Let us hold to our ideals as we pledge our unified effort, in a spirit of loyalty and devotion, to the members of the great humanitarian profession which we have the privileges of association.

Mrs. David W. Thomas, Member of the Publications Committee, and Past President, Woman's Auxiliary. (Taken from the August issue of the **Bulletin** of the Woman's Auxiliary to the American Medical Association.)

LEGISLATION REPORT

The Woman's Auxiliary to the American Medical Association has been called upon to assist with three major pieces of legislation during the coming year. These are: 1. The Bricker Resolution; 2. Bills allowing the deduction from income of expenses for post-graduate courses and advanced professional training, similar to H.R. 4393 by Davis of Georgia; 3. Reed-Keogh type bills, allowing tax deforment for retirement funds for the self-employed.

Senator Bricker desires a constitutional amendment which would limit the treaty powers of our government as they are at present set up, and to "protect the United States Constitution and the American system of government established in the Constitution, including the Bill of Right, against subversion by the Treaty Power; that will prevent treaties from becoming internal law within the United States, except to the extent made so by congress, just as in the case of any other federal statute.

The Woman's Auxiliary has been informed that the International Labor Organization has approved certain treaties or covenants which are in opposition to the accepted custom in the United States. These covenants are to be presented to the Congress of the United States for ratification. These covenants are the motive behind Senator Bricker's proposed amendment.

At the 30th Annual Meeting of the Woman's Auxiliary to the American Medical Association in June of this year 1953, it was resolved by the Woman's Auxiliary that they go on record as disapproving such treaties and covenants and that they favor the proposed amendments to the Constitution of the United States relating to the ratification of treaties and covenants.

There are erudite proes and cons regarding this resolution but the present amended bill

(Please turn to Page 382)

CHIROPODY, A HAND MAIDEN OF MEDICINE. Did you know this is what the Judicial Council of the American Medical Association says about chiropody? In 1939 this Council ruled that the practice of chiropody is not a cult practice as some have believed but "is rather a practice ancillary – a hand maiden – to medical practice in a limited field considered not important enough for a doctor of medicine to attend and therefore too often neglected. General opinion seems to be that chiropody fairly well satisfies a gam in medical care that the profession has failed to fill." Several large hospitals, as well as the Mayo Clinic, have chiropodists on their staffs, and the Mayo Clinic thinks so well of its chiropodist (Tarara) that a dinner was held in his honor on the occasion of his appointment as a voting member of the Clinic staff.

Read more about chiropody and chiropodists in the Delaware State Med. Journ., June, 1953, article by Friedman on "Dermatology and the Chiropodist," and the article by Sindoni on "The Role of the Chiropodist in Diabetes."

W.W.W.

has been approved by the American Bar Association and the American Medical Association and because of this bill will have a rough road ahead it is urged that we exert continuous pressure so that the bill will be considered and favorably reported by the Senate. The same consideration should be given H. J. Res. 280, by Reed of Illinois which is identical with the Bricker Resolution.

On the subject of taxation there are two points of particular interest to the Medical profession. The first is in regard to the deduction of postgraduate education expenses. The second subject (Reed-Koegh) which is of particular importance is No. 36 on the agenda. This is the question of allowing tax deferral for the establishment of retirement funds for the self-employed. This legislation would allow the physician to set aside, on a tax deferred basis, up to ten per cent of his income, but not to exceed $7,500.00 a year, in a trust fund, from which he may withdraw the money on retirement, paying taxes on it at that time. Mrs. Edgar E. Quale our National Legislation Chairman tells us that "all the old bills on socialized medicine are back in the hopper, and we must put the fight against socialized medicine on our agenda as permanent unfinished business." Our obligation as dutiful American citizens will not permit us to relax our vigilance or let down our guard in our struggle to help establish and support legislation that will benefit the greatest number of our fellow citizens. Let us valiantly and consistently assist in maintaining the freedom which we now enjoy.

Mrs. Charles L. von Pohle, Chandler, Arizona, State Legislation Chairman, Delegate to the Annual Convention of the Women's Auxiliary to the American Medical Association.

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